

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P. O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCR336

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
 SOW NO. 785
 LAB SAMPLE ID NO. MCR336

CASE NO. 8466
 Lab Receipt Date 11-13-87
 QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
 Matrix: Water _____ Soil X Other _____

()ug/L or (X)mg/kg dry weight

1. Aluminum 3200 P	13. Magnesium 6643 J P
2. Antimony 9.64 N P	14. Manganese 311 * P
3. Arsenic 8.9 F	15. Mercury 0.14 CV
4. Barium 65.2 P	16. Nickel 27 P
5. Beryllium 60.4 J P	17. Potassium 4404 P
6. Cadmium 5.1 * P	18. Selenium 1.24 N F
7. Calcium 2000 P	19. Silver 2.24 N P
8. Chromium 17.4 * P	20. Sodium 4654 P
9. Cobalt 68.9 J P	21. Thallium 2.34 N F
10. Copper 143 N P	22. Vanadium 23 P
11. Iron 56800 E * P	23. Zinc 390 N P
12. Lead 624 S F	Percent Solids (%) 83.2
Cyanide 0.54	

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Black soil.

Lab Manager D. Allatt for J. Onal

IFB Amend. One

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCR337

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MCR337

CASE NO. 8466
Lab Receipt Date 11-13-87
QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Other _____

()ug/L or (X)mg/kg dry weight

1. Aluminum	6600	P	13. Magnesium	2200	P
2. Antimony	8.6u N	P	14. Manganese	317 *	P
3. Arsenic	265	P	15. Mercury	0.2	CV
4. Barium	84.1	P	16. Nickel	25.5	P
5. Beryllium	60.63	P	17. Potassium	64863	P
6. Cadmium	4.8 *	P	18. Selenium	1u N	P
7. Calcium	4800	P	19. Silver	2u N	P
8. Chromium	25.7 *	P	20. Sodium	417u	P
9. Cobalt	6103	P	21. Thallium	2.1u N	P
10. Copper	102 N	P	22. Vanadium	38.9	P
11. Iron	34800 E *	P	23. Zinc	135 N	P
12. Lead	568	P	Percent Solids	(%) 82.3	
Cyanide	0.5u				

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Black soil.

Lab Manager D. Abbott for J. O'Neal

IFB Amend. One

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 PTS: 8-557-2490

EPA Sample No.

MCR338

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MCR338

CASE NO. 8466
Lab Receipt Date 11-13-87
QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Other _____

()ug/L or (X)mg/kg dry weight

1. Aluminum 12000	P	13. Magnesium 3000	P
2. Antimony 8.8u N	P	14. Manganese 245 *	P
3. Arsenic 8.45	F	15. Mercury 0.29	CV
4. Barium 71.9	P	16. Nickel 12.9	P
5. Beryllium 60.63	P	17. Potassium [877]	P
6. Cadmium 2.5 *	P	18. Selenium 1.35 N	F
7. Calcium 30200	P	19. Silver 2u N	P
8. Chromium 32.5 *	P	20. Sodium 425u	P
9. Cobalt [7.8]	P	21. Thallium 2.2u N	F
10. Copper 36.2 N	P	22. Vanadium 38.6	P
11. Iron 26500 E *	P	23. Zinc 136 N	P
12. Lead 131 S	F	Percent Solids (%) 82	
Cyanide 0.5u			

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Reddish brown soil.

Lab Manager D. Allott for J. O'Neal

IFB Amend. One

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P. O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

EPA Sample No.

MCR339

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
 SOW NO. 785
 LAB SAMPLE ID NO. MCR339

CASE NO. 8466
 Lab Receipt Date 11-13-87
 QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
 Matrix: Water _____ Soil X Other _____

()ug/L or (X)mg/kg dry weight

1. Aluminum 9600	P	13. Magnesium 2100	P
2. Antimony 8.5u N	P	14. Manganese 252 *	P
3. Arsenic 6.25	F	15. Mercury 0.1u	CV
4. Barium 45.6	P	16. Nickel 48.3	P
5. Beryllium 60.4J	P	17. Potassium 6505J	P
6. Cadmium 2.4 *	P	18. Selenium 1u N	F
7. Calcium 18800	P	19. Silver 2u N	P
8. Chromium 26.8 *	P	20. Sodium 410u	P
9. Cobalt 64.9J	P	21. Thallium 2u N	F
10. Copper 23.3 N	P	22. Vanadium 30.4	P
11. Iron 20300 E *	P	23. Zinc 304 N	P
12. Lead (1950) st	F	Percent Solids (%) 81.9	
Cyanide 0.5u			

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Reddish brown soil.

Lab Manager D. Albright for J. O'Neil

IFB Amend. One

049

ORIGINAL
(Red)

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCR340

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MCR340

CASE NO. 8466
Lab Receipt Date 11-13-87
QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Other _____

() ug/L or (X) mg/kg dry weight

1. Aluminum	11000	P	13. Magnesium	1400	P
2. Antimony	10.6 u N	P	14. Manganese	181 *	P
3. Arsenic	3.3	P	15. Mercury	0.1 u	CV
4. Barium	[37.9]	P	16. Nickel	13.5	P
5. Beryllium	[1]	P	17. Potassium	[5913]	P
6. Cadmium	2 *	P	18. Selenium	1.2 u N	F
7. Calcium	2800	P	19. Silver	2.5 u N	P
8. Chromium	33.7 *	P	20. Sodium	5/2 u	P
9. Cobalt	[7.9]	P	21. Thallium	2.4 u N	F
10. Copper	22.2 N	P	22. Vanadium	56.9	P
11. Iron	29100 E *	P	23. Zinc	48.8 N	P
12. Lead	122 u	P	Percent Solids	(%) 79.8	
Cyanide	0.5 u				

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Red - brown soil.

Lab Manager D. Abbott for J. ONeal

IFB Amend. One

Form I

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P. O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCR 341

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
 SOW NO. 785
 LAB SAMPLE ID NO. MCR341

CASE NO. 8466
 Lab Receipt Date 11-13-87
 QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
 Matrix: Water _____ Soil X Other _____

()ug/L or (X)mg/kg dry weight

1. Aluminum 14400	P	13. Magnesium 2100	P
2. Antimony 9.3u N	P	14. Manganese 192 *	P
3. Arsenic 4	F	15. Mercury 0.1u	CV
4. Barium 52.8	P	16. Nickel 21.8	P
5. Beryllium 0.6J	P	17. Potassium 959J	P
6. Cadmium 1.3 *	P	18. Selenium 1u N	F
7. Calcium 12500	P	19. Silver 2.2u N	P
8. Chromium 29.1 *	P	20. Sodium 448u	P
9. Cobalt 8.6J	P	21. Thallium 1.9u N	F
10. Copper 23.9 N	P	22. Vanadium 52.8	P
11. Iron 25700 E *	P	23. Zinc 80.4 N	P
12. Lead 2.5	F	Percent Solids (8) 82.9	
Cyanide 0.5u			

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Reddish brown soil.

Lab Manager D. Abbott for J. O'Neal

IFB Amend. One

051

ORIGINAL
(Red)

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.

MCR346

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MCR346

CASE NO. 8466
Lab Receipt Date 11-13-87
QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water _____ Soil X Other _____

() ug/L or (X) mg/kg dry weight

1. Aluminum	10600	P	13. Magnesium	4800	P
2. Antimony	[12.9] N	P	14. Manganese	604 *	P
3. Arsenic	20.23	P	15. Mercury	0.1 u	CV
4. Barium	71.3	P	16. Nickel	31.6	P
5. Beryllium	[0.7]	P	17. Potassium	[857]	P
6. Cadmium	2.4 *	P	18. Selenium	1.2 u N	P
7. Calcium	11400	P	19. Silver	2.2 u N	P
8. Chromium	34.7 *	P	20. Sodium	454 u	P
9. Cobalt	[9.6]	P	21. Thallium	2.3 u N	P
10. Copper	97.1 N	P	22. Vanadium	53.2	P
11. Iron	34500 E *	P	23. Zinc	183 N	P
12. Lead	297 S	F	Percent Solids	(%) 92.3	
Cyanide	0.5 u				

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Dark gray soil.

Lab Manager D. Allatt for J. O'Neal

IFB Amend. One

052

ORIGINAL
Red

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P. O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MCR347

Date 12-18-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME EPS
SOW NO. 785
LAB SAMPLE ID NO. MCR347

CASE NO. 8466
Lab Receipt Date 11-13-87
QC REPORT NO. 46

Elements Identified and Measured

Concentration: Low ☒ Medium _____
Matrix: Water _____ Soil ☒ Other _____

()ug/L or (X)mg/kg dry weight

1. Aluminum	12500	P	13. Magnesium	2000	P
2. Antimony	9.34 N	P	14. Manganese	386 *	P
3. Arsenic	12.75	F	15. Mercury	0.14	CV
4. Barium	63.7	P	16. Nickel	19	P
5. Beryllium	10.63	P	17. Potassium	18417	P
6. Cadmium	3 *	P	18. Selenium	1.14 N	F
7. Calcium	7800	P	19. Silver	2.24 N	P
8. Chromium	34.4 *	P	20. Sodium	4504	P
9. Cobalt	17.17	P	21. Thallium	2.14 N	F
10. Copper	49.1 N	P	22. Vanadium	58.6	P
11. Iron	37300 E *	P	23. Zinc	93.4 N	P
12. Lead	552 S	F	Percent Solids (%)	86.3	
Cyanide	0.54				

Footnotes: For reporting results to EPA, standard results qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown soil.

Lab Manager D. Bluff for J. Neal

IFB Amend. One

APPENDIX C

AGES LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT

September 28, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces

Samples

Submitted 9/10/84

AGES Lab I.D. #841291

	#6 Liquid Total (As Received)	#6 Liquid E.P. Toxicity Leachate
pH	5.75	---
Arsenic	---	0.002 mg/l
Barium	---	0.24 mg/l
Cadmium	---	0.21 mg/l
Chromium, Total	---	0.036 mg/l
Lead	---	0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	0.001 mg/l
Silver	---	0.026 mg/l

	#12 Solid Total (As Received)	#12 Solid E.P. Toxicity Leachate
pH	9.72	---
Arsenic	---	0.001 mg/l
Barium	---	0.12 mg/l
Cadmium	---	<0.004 mg/l
Chromium, Total	---	0.072 mg/l

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841291

	#12 Solid <u>Total (As Received)</u>	#12 Solid <u>E.P. Toxicity Leachate</u>
Lead	---	0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

	#21 Solid <u>Total (As Received)</u>	#21 Solid <u>E.P. Toxicity Leachate</u>
pH	8.34	---
Arsenic	---	0.002 mg/l
Barium	---	0.48 mg/l
Cadmium	---	0.022 mg/l
Chromium, Total	---	0.091 mg/l
Lead	---	0.14 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

	#25 Solid <u>Total (As Received)</u>	#25 Solid <u>E.P. Toxicity Leachate</u>
pH	6.37	---
Arsenic	---	<0.001 mg/l
Barium	---	0.24 mg/l
Cadmium	---	0.007 mg/l
Chromium, Total	---	0.036 mg/l
Lead	---	<0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

AGES

RECEIVED
9/10/84

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841291

	#30 Liquid Total (As Received)	#30 Liquid E.P. Toxicity Leachate
pH	5.34	---
Arsenic	---	0.002 mg/l
Barium	---	0.36 mg/l
Cadmium	---	0.007 mg/l
Chromium, Total	---	0.091 mg/l
Lead	---	<0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

	#31 Paint Solid Total (As Received)	#31 Paint Solid E.P. Toxicity Leachate
pH	4.70	---
Arsenic	---	<0.001 mg/l
Barium	---	0.12 mg/l
Cadmium	---	0.004 mg/l
Chromium, Total	---	0.036 mg/l
Lead	---	<0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/18/84
AGES Lab I.D. #841291

E.P. Toxicity Leachate Procedures

E.P. Toxicity Leachate is prepared according to the procedure outlined in the Federal Register, May 19, 1980, paragraph 261.24 and Appendix II. The leachate is prepared by mixing an aliquot of the sample with 16 times the sample weight of ASTM Class I water and agitating, while maintaining the pH of the mixture at 5.0 ± 0.2 for twenty-four hours. A pH adjustment is made if necessary with 0.5 N Acetic Acid with no more than 4 times the sample weight added to the mixture. The mixture is then adjusted to a final volume of 20 times the sample weight with ASTM Class I water. The amount of 0.5 N Acetic Acid added is included in the final adjustment volume. The mixture is pressure filtered through 0.45 micron filter media at a maximum pressure of 75 psi.

#12 Solid

Initial pH: 6.67
Final pH: 4.15

Amount of Acetic Acid used: 22. mls
Amount of sample leached: 100. grams

#21 Solid

Initial pH: 8.63
Final pH: 4.86

Amount of Acetic Acid used: 205. mls
Amount of sample leached: 100. grams

#31 Paint Solids

Initial pH: 3.95
Final pH: 4.18

Amount of Acetic Acid used: 0. mls
Amount of sample leached: 100. grams

Flash Point

#6 Liquid - Flame extinguished at 214°F due to water vapor.
Boiled at 214°F.

#25 Liquid - Flame extinguished at 216°F due to water vapor.
Boiled at 216°F.

#30 Liquid - Flame extinguished at 214°F due to water vapor.
Boiled at 214°F.

6/11/84
RAG

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841291-----

Ignitibility

An aliquot was placed in a crucible and gradually heated in an electric muffle furnace. The following observations were made:

#12 Solid

Temp_C

100

300

500

600

700

Observations

Nothing was observed.

Nothing was observed.

Nothing was observed.

Stones turned from green to black.

Sample remained the same.

#21 Solid

Temp_C

100

300

500

600

700

Observations

Nothing was observed.

Nothing was observed.

Nothing was observed.

Nothing was observed.

Nothing was observed.

#31 Paint Solids

Temp_C

200

300

400

500

600

700

Observations

Nothing was observed.

Sample began to smoke lightly.

Sample began to smoke heavily.

Sample turned white; emitting some smoke.

Sample stopped smoking.

Sample stopped smoking; remained brittle.

Corrosivity

#6 Liquid

5.75

#12 Solid

9.72

#21 Solid

8.34

#25 Liquid

6.37

#30 Liquid

5.34

#31 Paint Solids

4.70

RECEIVED
9/10/84

**Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841291**

Reactivity - the samples did not react violently or generate gases when mixed with water.

EPA Method for Reactive Cyanide and Sulfide in waste

Reactivity -	<u>H₂S</u>	<u>HCN</u>
#6 Liquid	<0.01 ppm/ml	<0.01 ppm/ml
#12 Solid	4.71 ppm/g	0.07 ppm/g
#21 Solid	<0.07 ppm/g	<0.07 ppm/g
#25 Liquid	<0.01 ppm/ml	<0.01 ppm/ml
#30 Liquid	<0.01 ppm/ml	<0.01 ppm/ml
#31 Paint Solids	0.01 ppm/g	<0.01 ppm/g

Based on the above results, the samples do not exhibit the characteristics of Ignitibility, Corrosivity, Reactivity or E.P. Toxicity as outlined in the Federal Register, May 19, 1980.

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #041291

#6 Liquid - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>48.</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>393.</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>97.</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as mg/kg.

ND = None Detected. (less than 1. mg/kg)

Respectfully submitted,

AGES Laboratories


Laboratory Manager

JT/mgn

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #041291

#6 Liquid - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>48.</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>393.</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>97.</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as mg/kg.

ND = None Detected. (less than 1. mg/kg)

Respectfully submitted,

AGES Laboratories


Laboratory Manager

JT/mgn

AGES

✓

AGES[®] LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT

September 28, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841292

	#32 Liquid Total (As Received)	#32 Liquid E.P. Toxicity Leachate
pH	5.86	---
Arsenic	---	0.001 mg/l
Barium	---	0.24 mg/l
Cadmium	---	<0.004 mg/l
Chromium, Total	---	0.054 mg/l
Lead	---	<0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

	#33 Liquid Total (As Received)	#33 Liquid E.P. Toxicity Leachate
pH	5.69	---
Arsenic	---	<0.001 mg/l
Barium	---	0.12 mg/l
Cadmium	---	<0.004 mg/l
Chromium, Total	---	0.018 mg/l

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841292

	#33 Liquid Total (As Received)	#33 Liquid E.P. Toxicity Leachate
Lead	---	<0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

	#34 Liquid Total (As Received)	#34 Liquid E.P. Toxicity Leachate
pH	6.34	---
Arsenic	---	<0.001 mg/l
Barium	---	0.081 mg/l
Cadmium	---	0.011 mg/l
Chromium, Total	---	0.52 mg/l
Lead	---	<0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.009 mg/l

	#40 Solid Total (As Received)	#40 Solid E.P. Toxicity Leachate
pH	7.85	---
Arsenic	---	<0.001 mg/l
Barium	---	0.48 mg/l
Cadmium	---	0.007 mg/l
Chromium, Total	---	0.036 mg/l
Lead	---	0.069 mg/l
Mercury	---	0.0004 mg/l
Selenium	---	<0.001 mg/l
Silver	---	0.009 mg/l

AGES

ORIGINAL
(Box)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841292

	#43 Solid Total (As Received)	#43 Solid E.P. Toxicity Leachate
pH	8.02	---
Arsenic	---	<0.001 mg/l
Barium	---	1.15 mg/l
Cadmium	---	0.078 mg/l
Chromium, Total	---	0.036 mg/l
Lead	---	0.94 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	0.003 mg/l
Silver	---	<0.009 mg/l

	#47 Solid Total (As Received)	#47 Solid E.P. Toxicity Leachate
pH	9.06	---
Arsenic	---	0.034 mg/l
Barium	---	0.57 mg/l
Cadmium	---	0.007 mg/l
Chromium, Total	---	0.27 mg/l
Lead	---	0.069 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	0.003 mg/l
Silver	---	<0.009 mg/l

AGES

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841292

ORIGINAL
Rev

E.P. Toxicity Leachate Procedure:

E.P. Toxicity Leachate is prepared according to the procedure outlined in the Federal Register, May 19, 1980, paragraph 261.24 and Appendix II. The leachate is prepared by mixing an aliquot of the sample with 16 times the sample weight of ASTM Class I water and agitating, while maintaining the pH of the mixture at 5.0 ± 0.2 for twenty-four hours. A pH adjustment is made if necessary with 0.5 N Acetic Acid with no more than 4 times the sample weight added to the mixture. The mixture is then adjusted to a final volume of 20 times the sample weight with ASTM Class I water. The amount of 0.5 N Acetic Acid added is included in the final adjustment volume. The mixture is pressure filtered through 0.45 micron filter media at a maximum pressure of 75 psi.

#40 Solid

Initial pH: 7.75
Final pH: 5.15

Amount of Acetic Acid used: 13. mls
Amount of sample leached: 100. grams

#43 Solid

Initial pH: 8.45
Final pH: 4.98

Amount of Acetic Acid used: 115. mls
Amount of sample leached: 100. grams

#47 Solid

Initial pH: 8.92
Final pH: 5.18

Amount of Acetic Acid used: 200. mls
Amount of sample leached: 100. grams

Flash Point

#32 Liquid - Flame extinguished at 210°F. Boiled at 210°F.

#33 Liquid - Flame extinguished at 205°F. Boiled at 205°F.

#34 Liquid - Flame extinguished at 212°F.

AGES

ORIGINAL
(filed)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841291

Ignitibility

An aliquot was placed in a crucible and gradually heated in an electric muffle furnace. The following observations were made:

#40 Solid
Temp°C
200 - 600
700

Observations
Nothing was observed.
Sample turned orange to light brown on top.

#43 Solid
Temp°C
200
400
500
600
700

Observations
Nothing was observed.
Nothing was observed.
Sample began to smoke.
Sample remained the same.
Sample remained the same.

#47 Solid
Temp°C
200
400
500
600
700

Observations
Nothing was observed.
Nothing was observed.
Sample began to smoke.
Sample turned white on top.
Sample remained the same.

Corrosivity

#32 Liquid	5.86
#33 Liquid	5.64
#34 Liquid	6.34
#40 Solid	7.85
#43 Solid	8.02
#47 Solid	9.04

AGES

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841292

Reactivity - the samples did not react violently or generate gases when mixed with water.

EPA Method for Reactive Cyanide and Sulfide in waste

Reactivity	H ₂ S	HCN
#32 Liquid	0.07 ppm/ml	<0.01 ppm/ml
#33 Liquid	0.09 ppm/ml	<0.01 ppm/ml
#34 Liquid	<0.01 ppm/ml	<0.01 ppm/ml
#40 Solid	103. ppm/g	<6.06 ppm/g
#43 Solid	143. ppm/g	<4.76 ppm/g
#47 Solid	<0.07 ppm/g	<0.07 ppm/g

Based on the above results, the samples do not exhibit the characteristics of Ignitibility, Corrosivity, Reactivity or E.P. Toxicity as outlined in the Federal Register, May 19, 1980.

Respectfully submitted,

AGES Laboratories


Jack Thorne
Laboratory Manager

JT/mgn

AGES

OCT 4 1984
ORIGINAL
(Red)

AGES LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT

September 28, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841288

	<u>pH</u>	<u>Sulfuric Acid</u>	<u>Nitric Acid</u>
#3 Drum pH(2	<1.	Not Present	Present
#4 Drum pH(2	<1.	Not Present	Present
#9 Drum pH(2	<1.	Not Present	Present
#10 Drum pH(2	<1.	Present	Not Present
#11 Drum pH(2	<1.	Not Present	Present

Respectfully submitted,

AGES Laboratories


Laboratory Manager

JT/mgn

OCT 10 1984

ORIGINAL
(Red)

✓
AGES LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants — Analytical Services

ANALYTICAL REPORT
October 3, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841289

	<u>pH</u>	<u>Caustic Soda Line</u>
#15 Drum pH>12	11.23	Present
#38 Drum pH>12	10.95	Present
#39 Drum pH>12	11.15	Present
#41 Drum pH>12	10.73	Present
#42 Drum pH>12	11.74	Present
#44 Drum pH>12	12.01	Present
#45 Drum pH>12	10.97	Present
#46 Drum pH>12	11.91	Present
#50 Solids	10.22	Present

Respectfully submitted,

AGES Laboratories


Laboratory Manager

JT/mgn

✓
AGES LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

RECEIVED
(Red)

Engineering Consultants - Analytical Services

ANALYTICAL REPORT
October 3, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

	<u>#5</u> <u>Solvent/Paint</u>	<u>#16 Chlorinated</u> <u>Solvent/Water</u>	<u>#37 Cl-Solvent</u>
Percent Solvent	---	28. %	18. %
Percent Water	---	6. %	10. %
Percent Solids	12.7%	---	---

	<u>#48</u> <u>Solvent/Paint</u>	<u>#49</u> <u>Solvent/Paint</u>
Percent Solids	7.2%	8.5%

LABORATORY SAMPLES ARE RETAINED BY AGES LABORATORIES
FOR 30 DAYS FROM THE DATE OF THIS ANALYTICAL REPORT.

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

FLASH POINT

#5 Solvent/Paint	- Flame extinguished at 154°F due to water vapor. Boiled at 164°F.
#20 Petroleum Product	- Flame extinguished at 230°F. Boiled at 230°F.
#24 Resin	- Flame extinguished at 120°F.
#48 Solvent/Paint	- Flame extinguished at 90°F. Boiled at 130°F.
#49 Solvent/Paint	- Flame extinguished at 110°F.

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

#5 Solvent/Paint - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>43.9</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>8.8</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>0.13</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>2.0</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

Re: Analysis of Alloy Surfaces
Samples

Submitted 9/18/84

AGES Lab I.D. #841298

#16 Chlorinated Solvent/Water - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>23123.</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as mg/kg.

ND = None Detected. (less than 1. mg/kg)

ORIGINAL
PAGE

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

#20 Petroleum Product - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
Mineral Spirits	<u>3.7</u>	Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

#24 Resin - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>5.0</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>29.</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

#37 Cl-Solvent - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>4757.</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>21.</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>113.</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>130000.</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as mg/kg.

ND = None Detected. (less than 1. mg/kg)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

#48 Solvent/Paint - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>61.</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>5.8</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>1.0</u>	O-Xylene	<u>14.4</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841290

#49 Solvent/Paint - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>30681.</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>328.</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>2714.</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>10588.</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as mg/kg.

ND = None Detected. (less than 1. mg/kg)

Respectfully submitted,

AGES Laboratories


Laboratory Manager

JT/mgn

AGES

OCT 19 1984
ORIGINAL
(100)



LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT
October 8, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841404

	<u>#63 Drum pH)2</u>	<u>#64 Drum pH)2</u>	<u>#65 Drum pH)2</u>	<u>#66 Drum pH)2</u>
pH	<1.	2.69	2.72	2.69
Sulfuric Acid	Not Present	Not Present	Not Present	Not Present
Hydrochloric	Present	Present	Present	Present
Phosphoric Acid	Not Present	Not Present	Not Present	Not Present
Nitric Acid	Not Present	Not Present	Not Present	Not Present

Respectfully submitted,

AGES Laboratories


Laboratory Manager

JT/mgn

AGES[®] LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT October 9, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841386

	<u>Percent Solids</u>	<u>Flash Point</u>
#7 Solvent/Paint	* 19.7%	36°F
#8 Solvent/Paint	* 14.5%	40°F
#18 Chlorinated Solvent	---	---
#60 Solvent	---	68°F
#62 Solvent/Paint	* 31.0%	Extinguished Flame at 150°F - Boiled at 205°F.

*NOTE: Due to the nature of the materials, i.e. solvents with paint tailings, the Total Solids are an approximate value.

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841386

#7 Solvent/Paint - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>10.4</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>1.1</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>21.0</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>1.1</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

ORIGINAL
COPY

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841386

#8 Solvent/Paint - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>3.7</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>11.2</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841386

#18 Chlorinated Solvent- -VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>0.19</u>
Acetone	<u>0.14</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>0.12</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>0.04</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>99.0</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

AGES

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841386

#60 Solvent - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>ND</u>
Acetone	<u>ND</u>	1,1,2 Trichloroethane	<u>ND</u>
Isopropanol	<u>100.</u>	Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>ND</u>
1,1 Dichloroethane	<u>ND</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>ND</u>
Chloroform	<u>ND</u>	Toluene	<u>ND</u>
Methyl-ethyl Ketone	<u>ND</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>ND</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>ND</u>
Carbon Tetrachloride	<u>ND</u>	M-Xylene	<u>ND</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as %.

ND = None Detected. (less than 1. mg/kg)

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841386

#62 Solvent/Paint - VOLATILE ORGANICS

The above sample was analyzed for Volatile Organics by the Headspace method. The analysis was performed with a gas chromatograph equipped with a flame ionization detector. Sample components were identified by comparison of peak retention times with the standard compounds listed below. The results of the analysis are:

Methylene Chloride	<u>ND</u>	Trichloroethylene	<u>79.</u>
Acetone	<u>18.</u>	1,1,2 Trichloroethane	<u>ND</u>
		Benzene	<u>ND</u>
1,1 Dichloroethylene	<u>ND</u>	Methyl-isobutyl Ketone	<u>338.</u>
1,1 Dichloroethane	<u>100.</u>	S-Tetrachloroethane	<u>ND</u>
T-1,2 Dichloroethylene	<u>ND</u>	Tetrachloroethylene	<u>1534.</u>
Chloroform	<u>ND</u>	Toluene	<u>675.</u>
Methyl-ethyl Ketone	<u>46.</u>	Chloro Benzene	<u>ND</u>
1,2 Dichloroethane	<u>ND</u>	Ethyl Benzene	<u>3401.</u>
1,1,1 Trichloroethane	<u>ND</u>	O-Xylene	<u>10533.</u>
Carbon Tetrachloride	<u>452.</u>	M-Xylene	<u>1612.</u>
1,2 Dichloropropane	<u>ND</u>	P-Xylene	<u>ND</u>

The results are expressed as mg/kg.

ND = None Detected. (less than 1. mg/kg)

Respectfully submitted,

AGES Laboratories



Laboratory Manager

JT/mgn

AGES

AGES LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

ORIGINAL
(Red)

Engineering Consultants - Analytical Services

*Large
Oil Dumps*

ANALYTICAL REPORT October 11, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/10/84
AGES Lab I.D. #841293

	<u>#19 Oil</u> <u>& Water</u>	<u>#23 Oil</u> <u>Sludge & Water</u>	<u>#26 Tar</u>
Oil & Grease	--	--	--
Percent Oil	54960. mg/l	--	--
Percent Water	40.%	80.%	--
Polychlorinated Biphenyls (As Arochlor 1254 or 1260)	ND	ND	ND
	<u>#27 Oil</u> <u>& Water</u>	<u>#29 Oil</u>	<u>#35 Oil</u>
Cyanide	--	--	0.009 mg/l
Percent Oil	2116. mg/l	--	--
Percent Water	80.%	--	--
Polychlorinated Biphenyls (As Arochlor 1254 or 1260)	ND	ND	ND

ND = None Detected. (less than 0.01 mg/l)

Respectfully submitted,
AGES Laboratories


Laboratory Manager

JT/mgn

LABORATORY SAMPLES ARE RETAINED BY AGES LABORATORIES
FOR 30 DAYS FROM THE DATE OF THIS ANALYTICAL REPORT

Re: Analysis of Alloy Surfaces
Submitted 9/24/84
AGES Lab I.D. #841405

10/1/84
(10/1)

	#54 Solid <u>Total (As Received)</u>	#54 Solid <u>E.P. Toxicity Leachate</u>
pH	12.62	---
Arsenic	---	0.082 mg/l
Barium	---	0.40 mg/l
Cadmium	---	0.020 mg/l
Chromium, Total	---	0.13 mg/l
Lead	---	0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

E.P. Toxicity Leachate Procedure:

E.P. Toxicity Leachate is prepared according to the procedure outlined in the Federal Register, May 19, 1980, paragraph 261.24 and Appendix II. The leachate is prepared by mixing an aliquot of the sample with 16 times the sample weight of ASTM Class I water and agitating, while maintaining the pH of the mixture at 5.0 ± 0.2 for twenty-four hours. A pH adjustment is made if necessary with 0.5 N Acetic Acid with no more than 4 times the sample weight added to the mixture. The mixture is then adjusted to a final volume of 20 times the sample weight with ASTM Class I water. The amount of 0.5 N Acetic Acid added is included in the final adjustment volume. The mixture is pressure filtered through 0.45 micron filter media at a maximum pressure of 75 psi.

#51 Solid

Initial pH: 7.95
Final pH: 4.84

Amount of Acetic Acid used: 8. mls
Amount of sample leached: 100. grams

#52 Solid

Initial pH: 9.85
Final pH: 4.80

Amount of Acetic Acid used: 25. mls
Amount of sample leached: 100. grams

#53 Paint Solids

Initial pH: 7.15
Final pH: 4.83

Amount of Acetic Acid used: 25. mls
Amount of sample leached: 100. grams

#54 Solid

Initial pH: 12.02
Final pH: 11.13

Amount of Acetic Acid used: 900. mls
Amount of sample leached: 100. grams

AGES

100-100-100
100-100-100

Re: Analysis of Alloy Surfaces
Submitted 9/24/84
AGES Lab I.D. #841405

Flash Point:

#13 Clear Liquid - Extinguished flame at 155°F. Boiled at 210°F.
#17 Liquid - 185°F.
#36 Liquid - Extinguished flame at 150°F. Boiled at 210°F.

Ignitibility:

An aliquot was placed in a crucible and gradually heated in an electric muffle furnace. The following observations were made.

#51 Solid

Temp °C

Observations

100	Nothing was observed.
200	Nothing was observed.
300	Nothing was observed.
400	Nothing was observed.
500	Sample turned a deeper black color.
600	Sample turned dark brown.

#52 Solid

Temp °C

Observations

100	Nothing was observed.
200	Nothing was observed.
300	Nothing was observed.
400	Nothing was observed.
500	Sample turned light brown; some granules red hot.
600	Sample turned light brown with red hot granules.

#53 Paint Solids

Temp °C

Observations

100	Nothing was observed.
200	Nothing was observed.
350	Sample began to turn dark brown; smoking lightly.
450	Sample turning black; emitting grey-brown smoke.
550	Sample turned black with red hot portions and light smoke.
650	Sample began to glow like hot ember.

#54 Solid

Temp °C

Observations

100	Nothing was observed.
200	Nothing was observed.
350	Sample began to melt and turn dark brown.
450	Sample still melting and turning black; emitting grey smoke.
550	Sample turned black; melted and smoking.
650	Sample black; no smoke.

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Submitted 9/24/84
AGES Lab I.D. #841405

Reactivity - the samples did not react violently or generate gases when mixed with water.

EPA Method for Reactive Cyanide and Sulfide in waste

Reactivity	-	<u>H₂S</u>	<u>HCN</u>
#13 Clear Liquid	-	<0.01 ppm/ml	<0.01 ppm/ml
#17 Liquid	-	<0.01 ppm/ml	<0.01 ppm/ml
#36 Liquid	-	<0.01 ppm/ml	<0.01 ppm/ml
#51 Solid	-	200. ppm/g	<6.7 ppm/g
#52 Solid	-	20.8 ppm/g	<4.2 ppm/g
#53 Paint Solids	-	<0.04 ppm/g	<0.04 ppm/g
#54 Solid	-	2.5 ppm/g	<0.6 ppm/g

Respectfully submitted,

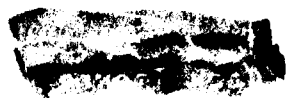
AGES Laboratories



Laboratory Manager

JT/mgr

AGES



AGES LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT

October 15, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841406

	#55 Liquid <u>Total (As Received)</u>	#55 Liquid <u>E.P. Toxicity Leachate</u>
pH	7.45	---
Arsenic	---	<0.001 mg/l
Barium	---	0.31 mg/l
Cadmium	---	0.010 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	<0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#56 Liquid <u>Total (As Received)</u>	#56 Liquid <u>E.P. Toxicity Leachate</u>
pH	7.34	---
Arsenic	---	<0.001 mg/l
Barium	---	0.26 mg/l

Re: Analysis of Alloy Surfaces
 Samples
 Submitted 9/24/84
 AGES Lab I.D. #841406

WJH:22
 (D)

	#56 Liquid Total (As Received)	#56 Liquid E.P. Toxicity Leachate
Cadmium	---	0.007 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	0.14 mg/l
Mercury	---	<0.0021 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.005 mg/l

	#57 Liquid Total (As Received)	#57 Liquid E.P. Toxicity Leachate
pH	7.61	---
Arsenic	---	<0.007 mg/l
Barium	---	0.088 mg/l
Cadmium	---	0.003 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	<0.072 mg/l
Mercury	---	<0.0021 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.005 mg/l

	#58 Liquid Total (As Received)	#58 Liquid E.P. Toxicity Leachate
pH	5.61	---
Arsenic	---	<0.001 mg/l
Barium	---	0.13 mg/l
Cadmium	---	<0.003 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	0.072 mg/l
Mercury	---	<0.0021 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.005 mg/l

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841406

	#59 Liquid Total (As Received)	#59 Liquid E.P. Toxicity Leachate
pH	7.27	---
Arsenic	---	<0.001 mg/l
Barium	---	0.088 mg/l
Cadmium	---	0.003 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	<0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#61 Liquid Total (As Received)	#61 Liquid E.P. Toxicity Leachate
pH	6.76	---
Arsenic	---	<0.001 mg/l
Barium	---	0.22 mg/l
Cadmium	---	0.007 mg/l
Chromium, Total	---	0.042 mg/l
Lead	---	<0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#67 Solid/Liquid Total (As Received)	#67 Solid/Liquid E.P. Toxicity Leachate
Arsenic	---	<0.001 mg/l
Barium	---	0.40 mg/l
Cadmium	---	0.037 mg/l
Chromium, Total	---	0.019 mg/l
Lead	---	0.44 mg/l
Mercury	---	0.0001 mg/l

AGES

ORIGINAL
Rec'd

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841406

	<u>#67 Solid/Liquid Total (As Received)</u>	<u>#67 Solid/Liquid E.P. Toxicity Leachate</u>
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	<u>#68 Solid/Liquid Total (As Received)</u>	<u>#68 Solid/Liquid E.P. Toxicity Leachate</u>
pH	6.70	---
Arsenic	---	<0.001 mg/l
Barium	---	0.26 mg/l
Cadmium	---	0.007 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	0.070 mg/l
Mercury	---	0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

E.P. Toxicity Leachate Procedure:

E.P. Toxicity Leachate is prepared according to the procedure outlined in the Federal Register, May 19, 1980, paragraph 261.24 and Appendix II. The leachate is prepared by mixing an aliquot of the sample with 16 times the sample weight of ASTM Class I water and agitating, while maintaining the pH of the mixture at 5.0 ± 0.2 for twenty-four hours. A pH adjustment is made if necessary with 0.5 N Acetic Acid with no more than 4 times the sample weight added to the mixture. The mixture is then adjusted to a final volume of 20 times the sample weight with ASTM Class I water. The amount of 0.5 N Acetic Acid added is included in the final adjustment volume. The mixture is pressure filtered through 0.45 micron filter media at a maximum pressure of 75 psi.

#67 Solid/Liquid

Initial pH: 4.94

Final pH: 4.87

Amount of Acetic Acid used: 27. mls.

Amount of sample leached: 100. grams

AGES

ORIGINAL
(3-4)

Re: Analysis of Alloy Surfaces
Samples
Submitted 9/24/84
AGES Lab I.D. #841406

#68 Solid/Liquid

Initial pH: 6.07

Final pH: 4.90

Amount of Acetic Acid used: 3. mls.

Amount of sample leached: 100. grams

Flash Point

#55 Liquid	- Extinguished flame at 150°F.	Boiled at 210°F.
#56 Liquid	- Extinguished flame at 140°F.	Boiled at 205°F.
#57 Liquid	- Extinguished flame at 140°F.	Boiled at 210°F.
#58 Liquid	- Extinguished flame at 145°F.	Boiled at 205°F.
#59 Liquid	- Extinguished flame at 150°F.	Boiled at 210°F.
#61 Liquid	- Extinguished flame at 150°F.	Boiled at 210°F.
#67 Solid/Liquid	- 26°F	

Ignitibility:

An aliquot was placed in a crucible and gradually heated in an electric muffle furnace. The following observations were made:

#68 Solid/Liquid

Temp°C

Observations

100	Nothing was observed.
250	Sample turned slightly dark brown.
400	Sample turned black; emitting grey smoke.
500	Sample remained the same.
600	Sample began to glow like hot ember.

Reactivity - the samples did not react violently or generate gases when mixed with water.

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Samples

Submitted 9/24/84

AGES Lab I.D. #841406

EPA Method for Reactive Cyanide and Sulfide in waste

Reactivity	-	H ₂ S	HCN
#55 Liquid	-	<0.01 ppm/ml	<0.01 ppm/ml
#56 Liquid	-	<0.01 ppm/ml	<0.01 ppm/ml
#57 Liquid	-	<0.01 ppm/ml	0.01 ppm/ml
#58 Liquid	-	<0.01 ppm/ml	0.01 ppm/ml
#59 Liquid	-	<0.01 ppm/ml	0.01 ppm/ml
#61 Liquid	-	<0.01 ppm/ml	<0.01 ppm/ml
#67 Solid/Liquid	-	<0.07 ppm/g	0.14 ppm/g
#68 Solid/Liquid	-	<0.07 ppm/g	0.13 ppm/g

Based on the above results, the samples do not exhibit the characteristics of Ignitibility, Corrosivity, Reactivity or E.P. Toxicity as outlined in the Federal Register, May 19, 1980.

Respectfully submitted,

AGES Laboratories


Jack Thorne
Laboratory Manager

JT/mgn

AGES

AGES[®] LABORATORIES

1151 S. Trooper Road, Norristown, PA 19403 (215) 666-7404

Engineering Consultants - Analytical Services

ANALYTICAL REPORT

October 16, 1984

Eldredge Inc.
898 Fern Hill Road
West Chester, PA 19380

Attn: Mel Tomlinson

Re: Analysis of Alloy Surfaces
Submitted 9/24/84
AGES Lab I.D. #841405

	<u>#13 Clear Liquid</u> <u>Total (As Received)</u>	<u>#13 Clear Liquid</u> <u>E.P. Toxicity Leachate</u>
pH	5.56	---
Arsenic	---	<0.001 mg/l
Barium	---	0.13 mg/l
Cadmium	---	<0.003 mg/l
Chromium, Total	---	0.064 mg/l
Lead	---	<0.070 mg/l
Mercury	---	<0.0006 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.003 mg/l
	<u>#14 Oil</u>	<u>#14 Oil</u>
	<u>Total (As Received)</u>	<u>E.P. Toxicity Leachate</u>
Polychlorinated Biphenyls (As Arochlor 1242)	3.8 mg/kg	---

Re: Analysis of Alloy Surfaces
Submitted 9/24/84
AGES Lab I.D. #841405

ANALYSIS
Lab

	#17 Liquid Total (As Received)	#17 Liquid E.P. Toxicity Leachate
pH	6.	---
Arsenic	---	<0.001 mg/l
Barium	---	0.18 mg/l
Cadmium	---	<0.003 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	0.070 mg/l
Mercury	---	<0.0006 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#36 Liquid Total (As Received)	#36 Liquid E.P. Toxicity Leachate
pH	10.5	---
Arsenic	---	<0.001 mg/l
Barium	---	0.31 mg/l
Cadmium	---	<0.003 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	<0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#51 Solid Total (As Received)	#51 Solid E.P. Toxicity Leachate
pH	7.12	---
Arsenic	---	<0.001 mg/l
Barium	---	<0.31 mg/l
Cadmium	---	0.020 mg/l
Chromium, Total	---	<0.021 mg/l

AGES

ORIGINAL
(Red)

Re: Analysis of Alloy Surfaces
Submitted 9/24/84
AGES Lab I.D. #841405

	#51 Solid Total (As Received)	#51 Solid E.P. Toxicity Leachate
Lead	---	0.21 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#52 Solid Total (As Received)	#52 Solid E.P. Toxicity Leachate
pH	8.92	---
Arsenic	---	<0.001 mg/l
Barium	---	0.22 mg/l
Cadmium	---	0.014 mg/l
Chromium, Total	---	<0.021 mg/l
Lead	---	0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.008 mg/l

	#53 Paint Solids Total (As Received)	#53 Paint Solids E.P. Toxicity Leachate
pH	7.20	---
Arsenic	---	<0.001 mg/l
Barium	---	0.40 mg/l
Cadmium	---	0.034 mg/l
Chromium, Total	---	12.2 mg/l
Lead	---	0.070 mg/l
Mercury	---	<0.0001 mg/l
Selenium	---	<0.001 mg/l
Silver	---	<0.005 mg/l

AGES